INTERNATIONAL SEARCH REPORT

International application No.

A. CLASSIPICATION OF SUBJECT NATTER Int.Cl		<u> </u>		PCT/JP2	004/008568.		
According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) Int. Cl ² G1189/00-9/14, 20/10-20/18, G91N13/00-13/24, G91N27/00-27/24, G91R27/00-27/32, H04B1/26-1/2B Documenturion tearched other ham minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1922-1996 Torocku Jitsuyo Shinan Koho 1994-2004 Kokal Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Torocku Koho 1996-2004 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003-163601 A (Sharp Corp.), G June, 2003 (06.06.03), Par. No. [0007] (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text 6 US 2003-0053400 Al Further document which may shrow doubts on priority claim(s) or which is a comment defining the general state of the art which is not considered on the comment which may shrow doubts on priority claim(s) or which is a comment defining the general state of the art which is not considered to establish the publication are of another claimon or other tensors of the comment of the comment is a comment which may shrow doubts on priority claim(s) or which is a comment of particular relevance, the claimed investion cannot be comment of particular relevance, the claimed investion cannot be comment of particular relevance, the claimed investion cannot be comment upon the priority date claimed of a survive an investive an investive and the priority of the claimed of survive an investive and the priority of the claimed of survive and investive and the comment is the comment of particular relevance, the claimed investion cannot be considered of survives in investive at the water o	A. CLASSIFIC	CATION OF SUBJECT MATTER			.,		
Minimum documentation scarched (classification system followed by classification symbols) Int. C1 C11B9/00-9/14, 20/10-20/16, G01N13/00-13/24, G01N27/00-27/24, G01R27/00-27/32, H04B1/26-1/28 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitauyo Shinan Koho 1922-1996 Torocku Jitauyo Shinan Koho 1994-2004 Kokai Jitauyo Shinan Koho 1971-2004 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003-163601 A (Sharp Corp.), Y 06 June, 2003 (06.06.03), Far. No. (10007) (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text 6 US 2003-0053400 A1 Further documents are listed in the continuation of Box C. See patent family annex. ** Special categories of sized documents.** ** document electronic content by published on or after the international fling date. Gournel published prior to the international fling date to repriority claim(s) or which is good occument referrings to an ord deflocance, use, exhibition or other massive document of periodar relevance, the claimod invention cannot be considered to involve an inventive step when the considered to involve an inventive step when the considered to involve an inventive step when the considered in such as the above considered in such as the above considered now of the actual completion of the international fling date but later than the priority date claim to the considered of the actual invention cannot be considered in such as the above considered in an inventive step when the considered in such as the above considered in a mineral vis step above considered in a store and invention cannot be considered in a store and invention cannot be considered in a store and invention cannot be considered in a store and in	Int.Cl' G11B9/02, 9/14, 20/10						
Minimum documentation scarched (classification system followed by classification symbols) Int. C1 C11B9/00-9/14, 20/10-20/16, G01N13/00-13/24, G01N27/00-27/24, G01R27/00-27/32, H04B1/26-1/28 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitauyo Shinan Koho 1922-1996 Torocku Jitauyo Shinan Koho 1994-2004 Kokai Jitauyo Shinan Koho 1971-2004 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003-163601 A (Sharp Corp.), Y 06 June, 2003 (06.06.03), Far. No. (10007) (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text 6 US 2003-0053400 A1 Further documents are listed in the continuation of Box C. See patent family annex. ** Special categories of sized documents.** ** document electronic content by published on or after the international fling date. Gournel published prior to the international fling date to repriority claim(s) or which is good occument referrings to an ord deflocance, use, exhibition or other massive document of periodar relevance, the claimod invention cannot be considered to involve an inventive step when the considered to involve an inventive step when the considered to involve an inventive step when the considered in such as the above considered in such as the above considered now of the actual completion of the international fling date but later than the priority date claim to the considered of the actual invention cannot be considered in such as the above considered in an inventive step when the considered in such as the above considered in a mineral vis step above considered in a store and invention cannot be considered in a store and invention cannot be considered in a store and invention cannot be considered in a store and in	·						
Minimum documentation scarched (classification system followed by classification symbols) Int. C1 C11B9/00-9/14, 20/10-20/16, G01N13/00-13/24, G01N27/00-27/24, G01R27/00-27/32, H04B1/26-1/28 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitauyo Shinan Koho 1922-1996 Torocku Jitauyo Shinan Koho 1994-2004 Kokai Jitauyo Shinan Koho 1971-2004 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003-163601 A (Sharp Corp.), Y 06 June, 2003 (06.06.03), Far. No. (10007) (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text 6 US 2003-0053400 A1 Further documents are listed in the continuation of Box C. See patent family annex. ** Special categories of sized documents.** ** document electronic content by published on or after the international fling date. Gournel published prior to the international fling date to repriority claim(s) or which is good occument referrings to an ord deflocance, use, exhibition or other massive document of periodar relevance, the claimod invention cannot be considered to involve an inventive step when the considered to involve an inventive step when the considered to involve an inventive step when the considered in such as the above considered in such as the above considered now of the actual completion of the international fling date but later than the priority date claim to the considered of the actual invention cannot be considered in such as the above considered in an inventive step when the considered in such as the above considered in a mineral vis step above considered in a store and invention cannot be considered in a store and invention cannot be considered in a store and invention cannot be considered in a store and in	According to Inte	emotional Potant Classification (TDC) and the					
Minimum documentation searched (clearification system followed by classification symbols) Int.Cl' G11B9/00-9/14, 20/10-20/18, G01N13/00-13/24, G01N27/00-27/24, G01R27/00-27/32, H04B1/26-1/28	And the individual Patent Classification (IPC) or to both national classification and IPC						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2004 Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT		•					
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2004 Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT	Minimum docum	nentation searched (classification system followed by cl	assification symbols)		······································		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Ultsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2004 Kokai Jitsuyo Shinan Koho 1971-2004 Shinan Toroku Koho 1994-2004 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages X JP 2003-163601 A (Sharp Corp.), Y O6 June, 2003 (06.06.03), Par. No. [0007] (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text 4 US 2003-0053400 A1 Further document which may throw doubts on priority claim(s) or which is citicd to establish the publication date of another citition or rother document which may throw doubts on priority claim(s) or which is citicd to establish the publication date of another citition or other means document which may throw doubts on priority claim(s) or which is citical to establish the publication date of another citition or other means document which may throw doubts on priority claim(s) or which is citical to establish the publication date of another citition or other means document which may throw doubts on priority claim(s) or which is citical to establish the publication date of another citition or other means document which may throw doubts on priority claim(s) or which is citical to establish the publication date of another citition or other means document stering to an oral disclosure, use, exhibition or other means document published prior to the international fling date but later than the publication of the comment published prior to the international fling date but later than the published prior to the international fling date but later than the published prior to the international fling date but later than the published prior to the international fling date but later than the published prior to the internation	Int.Cl'	G11B9/00-9/14, 20/10-20/18, (G01N13/00-13/2	4, G01N27/	00-27/24,		
Trestury Shinan Koho 1921–1904 Kokai Jitsuyo Shinan Koho 1994–2004 Jitsuyo Shinan Toroku Koho 1996–2004 Jitsuyo Shinan Koho 1996–2004 Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003–163601 A (Sharp Corp.),		GU1R27/00-27/32, H04B1/26-1/	28		• •		
Trestury Shinan Koho 1921–1904 Kokai Jitsuyo Shinan Koho 1994–2004 Jitsuyo Shinan Toroku Koho 1996–2004 Jitsuyo Shinan Koho 1996–2004 Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003–163601 A (Sharp Corp.),		·			•		
Trestury Shinan Koho 1921–1904 Kokai Jitsuyo Shinan Koho 1994–2004 Jitsuyo Shinan Toroku Koho 1996–2004 Jitsuyo Shinan Koho 1996–2004 Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003–163601 A (Sharp Corp.),	Documentation s	earched other than minimum documentation to the exte	ent that such documents				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X	Jitsuyo	Shinan Koho 1922–1996 To	roku Jitsuvo Sh	inan Kobo			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X	Kokai Ji	tsuyo Shinan Koho 1971-2004 Ji	tsuvo Shinan To	roku Koho			
C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X	Flectronic data h						
Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003-163601 A (Sharp Corp.), 06 June, 2003 (06.06.03), Par. No. [0007] (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text & US 2003-0053400 A1 ** Special categories of cited documents: "A" document defining the general state of the art which is not considered to or particular relevance; and the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority after decument which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the priority date claimed **Comment which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the priority date claimed **Comment which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the published prior to the international search considered novel or cannot be considered to involve an inventive step when the document is considered to involve an inventive step when the document is established with one or more other such document is established with one or more other such document is established in the art document is person claimed in the art document is established in the art document is provided to involve an inventive step when the document is established to involve an inve	Biccuonic data b	ase consulted during the international search (name of	data base and, where pra	cticable, search ter	ms used)		
Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003-163601 A (Sharp Corp.), 06 June, 2003 (06.06.03), Par. No. [0007] (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text & US 2003-0053400 A1 ** Special categories of cited documents: "A" document defining the general state of the art which is not considered to or particular relevance; and the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority after decument which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the priority date claimed **Comment which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the priority date claimed **Comment which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the published prior to the international search considered novel or cannot be considered to involve an inventive step when the document is considered to involve an inventive step when the document is established with one or more other such document is established with one or more other such document is established in the art document is person claimed in the art document is established in the art document is provided to involve an inventive step when the document is established to involve an inve							
Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 2003-163601 A (Sharp Corp.), 06 June, 2003 (06.06.03), Par. No. [0007] (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text & US 2003-0053400 A1 ** Special categories of cited documents: "A" document defining the general state of the art which is not considered to or particular relevance; and the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority citied to establish the publication date of another citation or other means the application or patent but published on or after the international fling date or priority after decument which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the priority date claimed **Comment which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the priority date claimed **Comment which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other means the published prior to the international search considered novel or cannot be considered to involve an inventive step when the document is considered to involve an inventive step when the document is established with one or more other such document is established with one or more other such document is established in the art document is person claimed in the art document is established in the art document is provided to involve an inventive step when the document is established to involve an inve	ļ						
X Y Of June, 2003 (06.06.03), Par. No. [0007] (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text & US 2003-0053400 A1 Further documents are listed in the continuation of Box C. See patent family annex. "T' abricular relevance of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance of the stabilish the publication but cited to understand filing date are related application or patent but published on or after the international filing date or priority activation of the stabilish the publication date of another citation or other special reason (as specified) "O' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other the priority date claimed investion cannot be considered to involve an inventive step when the document is taken alone document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to a nead disclosure, use, exhibition or other means the priority date claimed investion cannot be considered to involve an inventive step when the document is taken alone document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to an end disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to an end disclosure, use, exhibition or other means the priority date claimed. "Y' abrance and mailing address of the ISA/ Japanesse Patent Office Fassimile No.	C. DOCUMEN	ITS CONSIDERED TO BE RELEVANT					
X Y Of June, 2003 (06.06.03), Par. No. [0007] (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text & US 2003-0053400 A1 Further documents are listed in the continuation of Box C. See patent family annex. "T' abricular relevance of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance of the stabilish the publication but cited to understand filing date are related application or patent but published on or after the international filing date or priority activation of the stabilish the publication date of another citation or other special reason (as specified) "O' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other the priority date claimed investion cannot be considered to involve an inventive step when the document is taken alone document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to a nead disclosure, use, exhibition or other means the priority date claimed investion cannot be considered to involve an inventive step when the document is taken alone document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to a nead disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to an end disclosure, use, exhibition or other means the priority date claimed. "Y' document referring to an end disclosure, use, exhibition or other means the priority date claimed. "Y' abrance and mailing address of the ISA/ Japanesse Patent Office Fassimile No.	Category*	Citation of document with indication and					
Y 06 June, 2003 (06.06.03), Par. No. [0007] (Family: none) A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text & U3 2003-0053400 A1 Further documents are listed in the continuation of Box C. * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance to be of particular relevance to the publication date of another citation or other means cited to establish the publication date of another citation or other special reason (as specified) "O' document twich may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O' document referring to an oral disclosure, use, exhibition or other means the priority date claimed for the considered to involve an inventive step when the document is taken alone considered to involve an inventive step when the document is expected in the publication date of another citation or other special reason (as specified) Od document referring to an oral disclosure, use, exhibition or other means the priority date claimed "Comment published prior to the international filing date but later than the priority date claimed "Comment published prior to the international search 28 September, 2004 (28.09.04) Date of the actual completion of the international search 28 September, 2004 (28.09.04) Authorized officer Talephone No.		·		t passages	Relevant to claim No.		
Par. No. [0007] (Family: none) JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text & US 2003-0053400 A1 Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance article application or patent but published on or after the international filing date or priority claim(s) or which is good lareason (as specified) "C" document which may throw doubts on priority claim(s) or which is special reason (as specified) "C" document referring to an oral disclosure, use, exhibition or other special reason (as specified) "C" document referring to an oral disclosure, use, exhibition or other means document referring to an oral disclosure, use, exhibition or other means document referring to an oral disclosure, use, exhibition or other means document referring to an oral disclosure, use, exhibition or other means document of particular relevance, the claimed invention cannot be considered in vivolve an inventive step when the document of particular relevance, the claimed invention cannot be considered in vivolve an inventive step when the document of particular relevance, the claimed invention cannot be considered in vivolve an inventive step when the document of particular relevance, the claimed invention cannot be considered in vivolve an inventive step when the document of particular relevance or more other such document step when the document means of the comment of particular relevance the claimed invention cannot be considered in vivolve an inventive step when the document is a combined with one or more other such document step when the document of particular relevance, the claimed invention cannot be considered to involve an inventive an inventive and the priority date claimed "Y" See patent family annex. To be a particular relevance, the claimed invention cannot be considered to involve an inventive and the priority dat		JP 2003-163601 A (Sharp Corp).),		1,5,10		
Further documents are listed in the continuation of Box C. The standard of the actual completion of the international filing date but later than the priority date claimed in or other than the priority date claimed. The followers the first part of the actual completion of the international filing date but later than the priority date claimed. The same pattern of the actual completion of the international filing date but later than the priority date claimed. The same pattern of the actual completion of the international filing date but later than the priority date claimed international filing date but later than the priority date claimed. The same pattern of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is the comment of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one rore other such document is combined	<u> </u>	06 June, 2003 (06.06.03),			2-4,6,7		
A JP 2003-85969 A (Pioneer Electronic Corp.), 20 March, 2003 (20.03.03), Full text & US 2003-0053400 A1 Special categories of cited documents: "Special categories of cited documents: "a" document defining the general state of the art which is not considered to be of particular relevance arise application or patent but published on or after the international filing date or priority date claimed invention or other special reason (as specified) "Co document which may throw doubts on priority claim(s) or which is special reason (as specified) "Co document referring to an oral disclosure, use, exhibition or other special reason (as specified) "Co document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed "Counter referring to an oral disclosure, use, exhibition or other means document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is send combination being obvious to a person skilled in the art "A" Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office Fassimile No.							
Further documents are listed in the continuation of Box C. * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance: "E" earlier application or patent but published on or after the international filing date "I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document referring to an oral disclosure, use, exhibition or other means and occument published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Date of mailing of the international search 28 September, 2004 (28.09.04) Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.		(ramity: none)					
Further documents are listed in the continuation of Box C. * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance: "E" earlier application or patent but published on or after the international filing date "I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document referring to an oral disclosure, use, exhibition or other means and occument published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Date of mailing of the international search 28 September, 2004 (28.09.04) Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.	A	JP 2003-85969 A (Pioneer Ele	ctronic Com	,	0 0 11 16		
Further documents are listed in the continuation of Box C. * Special categories of cited documents: "A" "Accountent defining the general state of the art which is not considered to be of particular relevance to particular relevance artier application or patent but published on or after the international filing date of particular relevance; the claimed invention cannot be considered novel or cannot be considered to establish the publication date of another citation or other special reason (as specified) "To document referring to an oral disclosure, use, exhibition or other means document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or establish the publication date of another citation or other special reason (as specified) "Countent referring to an oral disclosure, use, exhibition or other means document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or local published on the citation or with the principle or constincted in once you need the principle or constincted once you need to particular relevance; the claimed invention cannot be considered to vinvolve an inventive step when the document is taken alone "Y" "See patent family annex. "T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or constincted novel or cannot be considered to involve an inventive step when the document is taken alone "Y" "See patent family annex. To later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or constinct on the prin		20 March, 2003 (20.03.03).	ccronic corp.	"	8,9,11-16		
Further documents are listed in the continuation of Box C. * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance to be of particular relevance ariser application or patent but published on or after the international filing date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle date and not in conflict with the application but cited to understand the principle are and not in conflict with the application but cited to understand the principle are and not in conflict with the application but cited to understand the principle and not in conflict with the application but cited to understand the principle are in the principle and not in conflict with the application but cited to understand the principle are and not in conflict with the application but cited to understand the principle are and not in conflict with the application but cited to understand the principle are and not in conflict with the application but cited to understand the principle are and not in conflict with the application but cited to understand the principle and not in conflict with the application the principle date and not in conflict with the application but cited to understand the principle and the principle and not in conflict with the application the principle		Full text					
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.		& US 2003-0053400 A1					
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention of the international filing date or priority document of particular relevance; the claimed invention of the international filing da							
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention of the international filing date or priority document of particular relevance; the claimed invention of the international filing da				ļ			
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention of the international filing date or priority document of particular relevance; the claimed invention of the international filing da							
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention of the international filing date or priority document of particular relevance; the claimed invention of the international filing da	<u>'</u>	·					
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention of the international filing date or priority document of particular relevance; the claimed invention of the international filing da	}	•					
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search 2004 (12.10.04) Authorized officer Telephone No.		•					
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search 2004 (12.10.04) Authorized officer Telephone No.							
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention of the international filing date or priority document of particular relevance; the claimed invention of the international filing da							
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention of the international filing date or priority document of particular relevance; the claimed invention of the international filing da							
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention of the international filing date or priority document of particular relevance; the claimed invention of the international filing da	Further do	cuments are listed in the continuation of Box C	See patent famil				
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the priority date invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.		· · · · · · · · · · · · · · · · · · ·					
"E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.	j opeoiai careg	efining the general state of the art which is not considered.		lished after the inter	national filing date or priority		
"E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.	to be or parti	icular relevance	the principle or the	and with the applications underlying the in-	non out cited to understand vention		
document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "O" document which may throw doubts on priority claim(s) or which is step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.		cation or patent but published on or after the international	"X" document of partic	ular relevance: the cl	aimed invention cannot be		
special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.	"L" document w	hich may throw doubts on priority claim(e) or which is	considered novel	or cannot be consid	ered to involve an inventive		
"O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office Considered to involve an inventive step when the document is combined with one or more other such docu	cited to esta	Dish the publication date of another citation or other	"Y" document of partic	ular relevance: the cl	aimed invention serves be		
"P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office Telephone No.			considered to inv	Olve an inventive s	ten when the document is		
Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office Telephone No.	"P" document pu	iblished prior to the international filing date but later than	combined with one	COMDINED With one of more other such documents, such combination.			
Date of the actual completion of the international search 28 September, 2004 (28.09.04) Name and mailing address of the ISA/ Japanese Patent Office Date of mailing of the international search report 12 October, 2004 (12.10.04) Authorized officer Telephone No.	the priority o	late claimed	"&" document member	of the same patent fa	mily		
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No. 12 October, 2004 (12.10.04) Authorized officer Telephone No.	P	Data of the natural name lating of the same lating					
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No. 12 October, 2004 (12.10.04) Authorized officer Telephone No.	Date of the actual	completion of the international search	Date of mailing of the	international searc	h report		
Japanese Patent Office Facsimile No. Telephone No.	20 Sept	emmer, 2004 (28.09.04)	12 Octobe	r, 2004 (1	2.10.04)		
Japanese Patent Office Facsimile No. Telephone No.							
Japanese Patent Office Facsimile No. Telephone No.	Name and mailin	g address of the ISA/	Authorized officer				
	Japanes	se Patent Office					
	Facsimile No.	Facsimile No.					
Form PCT/ISA/210 (second sheet) (January 2004)		0 (second sheet) (January 2004)	Telephone No.				

A. 発明の属する分野の分類(国際特許分類 (IPC))

Int. Cl' G11B9/02, 9/14, 20/10

B. 調査を行った分野

調査を行った最小限資料(国際特許分類(IPC))

Int. Cl' G11B9/00-9/14, 20/10-20/18, G01N13/00-13/24, G01N27/00-27/24, G01R27/00-27/32, H04B1/26-1/28

最小限資料以外の資料で調査を行った分野に含まれるもの

日本実用新案公報

1922-1996年

日本公開実用新案公報

1971-2004年

日本登録実用新案公報

1994-2004年

日本実用新案登録公報

1996-2004年

国際調査で使用した電子データベース(データベースの名称、調査に使用した用語)

C. 関連すると認められる文献				
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号		
X	JP 2003-163601 A (シャープ株式会社)	1, 5, 10		
,	2003.06.06,段落【0007】 (ファミリーなし)	1, 0, 10		
Y		2-4, 6,		
		7		
A	J.P 2003-85969 A (パイオニア株式会社)	8, 9,		
	2003.03.20,全文	11-16		
	& US 2003-0053400 A1			
ļ				

□ C欄の続きにも文献が列挙されている。

□ パテントファミリーに関する別紙を参照。

* 引用文献のカテゴリー

- 「A」特に関連のある文献ではなく、一般的技術水準を示す もの
- 「E」国際出願日前の出願または特許であるが、国際出願日 以後に公表されたもの
- 「L」優先権主張に疑義を提起する文献又は他の文献の発行 日若しくは他の特別な理由を確立するために引用する 文献(理由を付す)
- 「O」口頭による開示、使用、展示等に言及する文献
- 「P」国際出願日前で、かつ優先権の主張の基礎となる出願

- の日の後に公表された文献
- 「T」国際出願日又は優先日後に公表された文献であって 出願と矛盾するものではなく、発明の原理又は理論 の理解のために引用するもの
- 「X」特に関連のある文献であって、当該文献のみで発明 の新規性又は進歩性がないと考えられるもの
- 「Y」特に関連のある文献であって、当該文献と他の1以 上の文献との、当業者にとって自明である組合せに よって進歩性がないと考えられるもの
- 「&」同一パテントファミリー文献

国際調査を完了した日

28.09.2004

国際調査報告の発送日

12.10.2004

国際調査機関の名称及びあて先

日本国特許庁(ISA/JP)

郵便番号100-8915 東京都千代田区霞が関三丁目4番3号

特許庁審査官(権限のある職員)

5D 3046

楪 広行

電話番号 03-3581-1101 内線 3550